

FIG. 1

					•									٠.		
	Evaluation	point	12	36		24	36	18	42	18	30					
>	Measured	value	>35	>80		>0.5	>0.5	>0.5	>0.5	>10	>0.3		<0.5			
	Evaluation	point	8	24		16	24	12	28	12	20					
λſ	Measured	value	≤35	08≡		≤0.5	≥0.5	≥0.5	≥0.5	≤10	≤0.3		≥0.5			Ayene
	Measured Evaluation Measured Evaluation Measured Evaluation Measured Evaluation Measured Evaluation	point	4	12		8	12	9	14	9	10					
E	Measured	value	≥30	≥70		≤0.2	≤0.2	≤0.2	≤0.2	≤1.0	≥ 0.1		≥1.0			
	Evaluation	point	2	9		4	9	3	7	3	5					
-	Measured	value	≥25	≥ 65		≥0.05	≥0.05	≥0.05	≤0.05	≥0.1	≤ 0.03		≥1.5			
	Evaluation	point	_	_		_	_	_	_	-	_					
_	Measured	value	≥20	99≅		≥ 0.02	H ₂ S C2 ≤ 0.02	C3 ≤ 0.02	C4 ≤ 0.02	C5 ≤0.02	≥0.01		>2.0			
Ħ		/	<	m		ច	ខ	ဗ	শ্র	Ü			0			
Atmospheric environment	Environmental factors		re (°C)	unidity		Corrosive SO ₃ SO ₂ C1 ≤0.02	H ₂ S	NO	Ö	ZH,	Sea salt	particle (mdd)		from	coast	(km)
Atmospher	Environme		Temperature (°C)	Relative humidity	(%RH)	Corrosive	gas	(mdd)			Sea salt	particle				

FIG.

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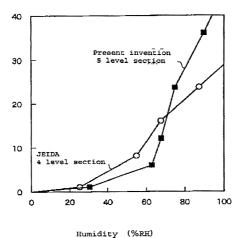


FIG. 3

OBLON, SPIVAK, ET AL DOCKET #: 202686US2TTC INV: Katsumi KANEHIRA, et al. SHEET 4_OF_18_



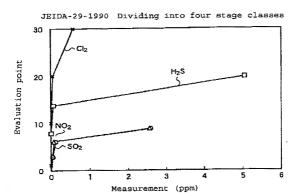


FIG. 4A

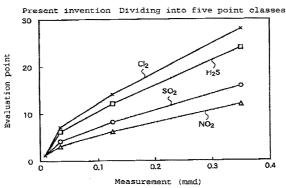


FIG. 4B

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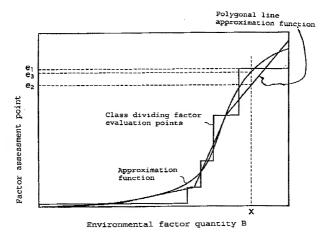
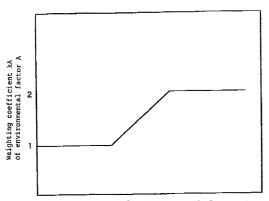


FIG. 5

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Quantity X of environmental factor B $FIG. \ 6$

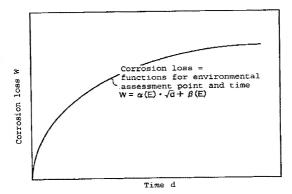


FIG. 7

Maximum function value of corrosion loss of metallic material prediction function represented by function

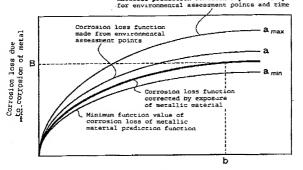


FIG. 8

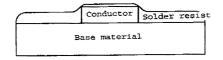
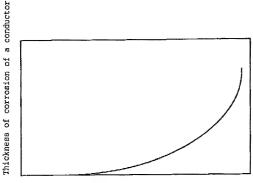


FIG. 9

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Amount of corroded copper

FIG. 10A

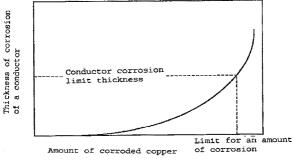
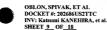
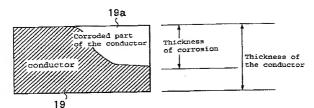


FIG. 10B





Corrosion loss rate= (thickness of corrosion/thickness of the conductor) ×100

FIG. 11

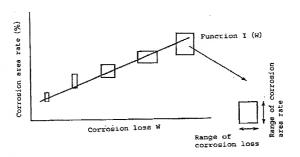


FIG. 12

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:	;	:	:	÷	:	
			plend			
 I ₃ (W)		SiN	Polyimide	H Inc.	1992	53
			blend			
 P2(W)		None	Epoxy	N Inc.	1979	54
			plend			
 1 ⁽³⁴⁾		PSG	Epoxy	T Inc.	1982	5
ype Year Manufacturer Sealing resin Chip protective film Other Correlation function J(W)	Other	Chip protective film	Sealing resin	Manufacturer	Year	30

FIG. 13

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Sealing Chip protective Other Change of time sequence of aluminum wiring corrosion resin film Correlation function Rulo 8 aluminium wiring corrosion area rate of aluminium wiring corrosion area rate and failis	Correlation function $P(t)$ of aluminium wing corrosion are rate and faults $U_1 = m_1(t), F_1 = n_1(u)$	$U_2 = m_2(1), F_2 = n_2(u)$	$U_3 = m_3(t), F_3 = n_3(u)$
Other			
Chip protective film	PSG	None	Silv
Sealing resin	Epoxy Flend	Epoxy blend	Polyimide blend
IC Year Manufacturer	T Inc.	N Inc.	H Inc.
Year	ype ICI 1982	1079	1992
J. Syse	ZCI Z	122	ទ

FIG. 14

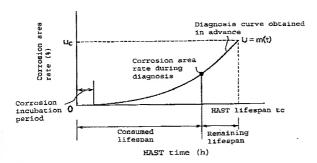
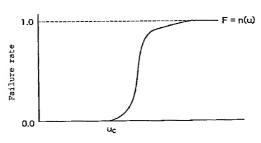


FIG. 15



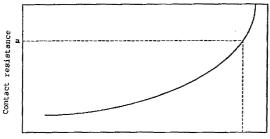
Corrosion area average rate (%)

FIG. 16



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Film thickness

FIG. 17

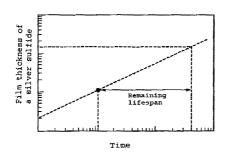


FIG. 18

OBLON, SPIVAK, ET AL DOCKET #: 202686US2TTC INV: Katsumi KANEHIRA, et al. SHEET 14 OF 18

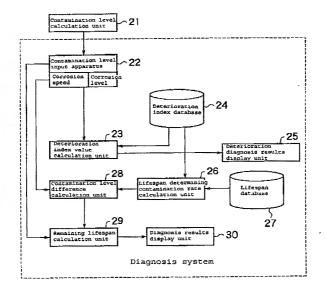
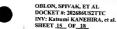


FIG. 19



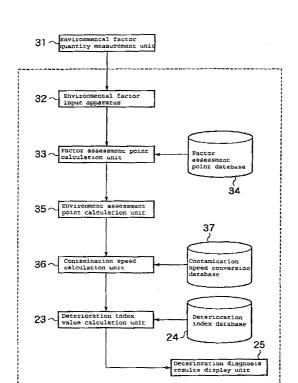
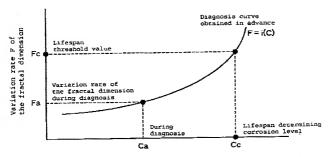


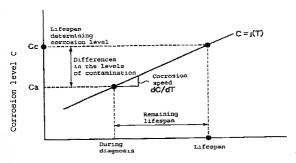
FIG. 20

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Corrosion level C

FIG. 21



Time of usage T

FIG. 22

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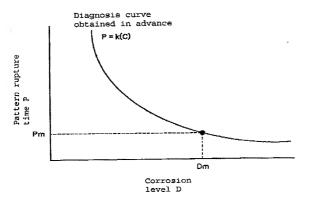


FIG. 23

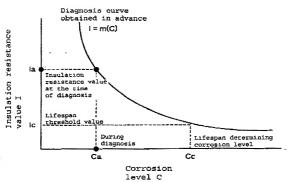
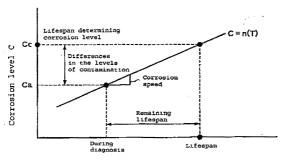


FIG. 24



Time of usage T

FIG. 25